NOTES ON THE SHELLS OF *TRIDACNA*, AND DESCRIPTION OF A NEW SPECIES.

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In my endeavours to sort out a large number of shells of this genus, and to place together the supposed species, I have found, as is usually the case in other genera, that some of the characters regarded as specific are inconstant, and that intermediate forms link together some of those apparently distinct. I have examined the hinges of a large number of specimens in the expectation of finding some distinctive characters, but in this respect there appear to be no differences excepting such as may be accounted for by age or circumstances of development. The more or less elongated forms of the shells and the number of radiating ribs do not appear to be reliable characters.

Having brought my investigations to this point, it may seem almost an inconsistency to propose a new species; but the form I propose to call *Tridacna acuticostata* certainly does seem distinct from all the others.

The following are the principal works treating upon the genus:—

(*a*) Monographs of the Shells.

1845. J. C. Chenu, Illustrations Conchyliologiques, pp. 1–2, pls. i–viii.
1862. L. Reeve, Conchologia Iconica, vol. xiv, pls. i–viii.
1868. H. C. Küster, Conchylien-Cabinet, pp. 1–7, pls. i–ii.
1884. G. B. Sowerby, Thesaurus Conchyliorum, vol. v, pp. 179–82, pls. 485–9*.
1903. J. G. Hidalgo, Mem. Real. Acad. Ciencias Madrid, vol. xxi, pp. 382–99.

(*b*) Anatomy.

1865. L. Vaillant, Ann. Sci. Nat. Paris, vol. iv, pp. 64–172, pls. viii–xii.
1890. A. Ménégaux, Recherches circulation Lamellibranches, pp. 130–4.
1899. K. Grobben, Denkschrift. Akad. Wissensch., vol. lxv, pp. 438–44, pl.
1902. H. de Lacaze-Duthiers, Archiv. Zool. Expér., vol. x, pp. 99–212, pl.
1904. R. Anthony, Comptes Rendus Acad. Sci. Paris, vol. cxxxviii, pp. 296–8, figs.

List of Species.

1. T. gigas, Linn. (Sowerby, Thes. Conch., vol. v, p. 179, pl. 188, fig. 11). Of this, largest of all bivalved molluscs, there is a specimen in the British Museum 3 feet in length and weighing 310 lb., and specimens have been recorded attaining to even larger dimensions and weighing 500 lb.[1] I have not been able with any certainty to trace the young of this species; the shells supposed to represent it in Reeve's Conch. Icon., figs. 1*b*, *c*, I regard as very unlikely; at all events they are inseparable from the diversiform *T. elongata*. The shell figured and described by Reeve as *T. gigas* (pl. i, fig. 1) figures in the Thes. Conch. as *T. mutica*, Lamk., but it is identical with the *T. gigas* as figured in Chenu's *Illustrations Conchyliologiques* from the Delessert

[1] See Smith, Proc. Malac. Soc., vol. iii, p. 111.

Collection. This variety has been named by Hidalgo *T. Lamarcki*. A specimen of intermediate size, 18 inches in length, unites these two forms, showing that the differences pointed out in the Thes. Conch. (vol. v, p. 180) are not constant.

2. T. MUTICA, Lamk. (Chenu, *Illustrations Conchyliologiques*). This is quite distinct from the forms mentioned above. It has no appearance of lamellæ or scales, while the fine radiating liræ are very conspicuous. It seems readily separable from all the other species.

3. T. SQUAMOSA, Lamk. (Thes. Conch., vol. v, p. 180, figs. 2, 7, 15). This common well-known species can scarcely be confounded with any other.

4. T. ELONGATA, Lamk. (Conch. Icon., pl. ii, figs. 2*a*, *b*; Thes. Conch., vol. v, pl. 486, figs. 3, 4). I am compelled to unite with this very variable species Reeve's *T. compressa* (Conch. Icon., sp. 5) and *T. rudis* (Conch. Icon., figs. 4*a*, *b*). It seems to me also that *T. lanceolata*, Sowerby (Thes. Conch., vol. v, p. 181, pl. 489*, fig. 18), is only a more than usually lanceolate form of the same. *T. elongatissima*, Bianconi,[1] is the variety *compressa*, Reeve. Hidalgo has given the name *T. Reevei* to the shell figured in Reeve's Conch. Icon., fig. 2*b*, which differs from the type in being more sharply acuminated in front.

I have exhibited an abnormal form shaped like a *Trigonia*, and another of the variety *compressa*, a very curious malformation, in which the animal having formed a very perfect little shell made a fresh start from the umbones, leaving the young shell as a decorative appendage.

5. T. CROCEA, Lamk. (Reeve, Conch. Icon., pl. viii, figs. 9*a*, *b*). This is of a very different type from the preceding, but so variable in form that I am obliged to unite with it *T. Cumingi*, Reeve (Conch. Icon., pl. vii, figs. 7*a*, *b*), *T. ferruginea*, Reeve (Conch. Icon., sp. 8), and *T. scapha*, Meusch. (Thes. Conch., fig. 16).

6. T. SERRIFERA, Lamk. (Thes. Conch., vol. v, pl. 489*, fig. 17, as var. of *T. squamosa*). This species seems to stand alone. The beautiful specimen in the British Museum is yellow; it has no lamellæ or prominent scales, but is serrated near the umbones with a few very small sharp scales. Our specimens from the Philippines are white, smaller, and more compressed.

7. T. OBESA, Sowerby (Proc. Malac. Soc., vol. iii, p. 210, 1899). Beyond the three specimens mentioned of this very distinct species I have as yet seen no others.

8. TRIDACNA ACUTICOSTATA, n.sp.

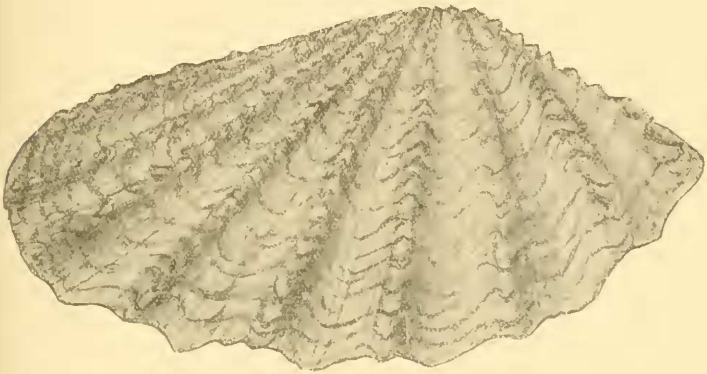
Shell oblong, white, anterior produced, rounded at the extremity, posterior shorter, sloping, and forming at the extremity with the ventral margin a rather acute angle; byssal orifice large, oblong-acuminate, revealing two short rows of nodules at the posterior end; ribs about 9, angular, distant, surmounted by small, close-set, angular, and nodulous scales, interstices broadly concave, lirate, crossed by stout

[1] Spec. Zoolog. Mosambicana, p. 238, pl. iv, fig. 2.

irregular waved ridges. Hinge as in other *Tridacnæ*, the principal cardinal tooth in each valve being moderately thick. Length 125, height 68 mm.

Hab.—Philippines.

This species differs from *T. elongata* chiefly in the angularity of its ribs, the absence of lamellæ, and the very different character and small size of the scales on the ribs.



All the species mentioned in this paper, with the exception of *T. mutica* (which I have not seen), were received from the Philippines in the year 1898, when I described *T. obesa*; most of them, however, are pretty generally distributed in the Indian and Pacific Oceans.

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